

CLAIMS

What is claimed is:

- 5 1. A method for preventing a plurality of electronic devices from being pulled out of an equipment rack simultaneously, said method comprising:
- determining with an electronic sensor module whether an electronic device of a plurality of electronic devices coupled to said equipment rack is being slid out of said equipment rack;
- 10 provided said electronic device is being slid out of said equipment rack, preventing with an electronic locking module any remaining electronic device of said plurality of electronic devices from being slid out of said equipment rack;
- determining whether said electronic device has been slid back into said equipment rack; and
- 15 provided said electronic device has been slid back into said equipment rack, deactivating said preventing.
2. The method as described in Claim 1, wherein said electronic device is selected from a server computer, a router, a disk array, a computing
- 20 device, a telecommunications device, an electronic data storage device, and a piece of electronic equipment.
3. The method as described in Claim 1, wherein said electronic sensor module is selected from an optical sensor, a proximity sensor, a
- 25 mechanical switch, an electro-mechanical sensor, a mechanical sensor, an

ultrasonic sensor, a hall-effect sensor, and a Linear Variable Differential Transformer (LVDT).

4. The method as described in Claim 1, wherein said electronic
5 locking module is selected from a solenoid, a solenoid capable of engaging and
disengaging a pin or a type of latch, an electric motor capable of engaging and
disengaging a pin or a type of latch, an electro-mechanical device, solid state
circuitry, and a magnetic latch.

10 5. The method as described in Claim 1, wherein said determining
whether said electronic device has been slid back into said equipment rack
involves said electronic sensor module.

6. The method as described in Claim 1, wherein said plurality of
15 electronic devices coupled to said equipment rack with a slide rail.

7. The method as described in Claim 6, wherein said electronic
sensor module and said electronic locking module are coupled to said slide rail.

20 8. A system for preventing a plurality of electronic devices from being
pulled out of an equipment rack simultaneously, said system comprising:

a sensor module for detecting when a first electronic device coupled to
said equipment rack is being slid out of said equipment rack;

a locking module for preventing a second electronic device coupled to
25 said equipment rack from being slid out of said equipment rack; and

an electronic control module coupled to said sensor module and said locking module.

9. The system as described in Claim 8, wherein said electronic device
5 is selected from a server computer, a router, a disk array, a computing device, a telecommunications device, an electronic data storage device, and a piece of electronic equipment.

10. The system as described in Claim 8, wherein said sensor module
10 is selected from an optical sensor, a proximity sensor, a mechanical switch, a mechanical sensor, an electro-mechanical sensor, an ultrasonic sensor, a hall-effect sensor, and a Linear Variable Differential Transformer (LVDT).

11. The system as described in Claim 8, wherein said locking module
15 is selected from a solenoid, an electro-mechanical device, a solenoid capable of engaging and disengaging a pin or a latch, an electric motor capable of engaging and disengaging a pin or a latch, solid state circuitry, and a magnetic latch.

20 12. The system as described in Claim 8, wherein said electronic control module is selected from a processor, a controller, a state machine, and a microprocessor.

13. The system as described in Claim 8, wherein said sensor module also for detecting when said first electronic device has been slid back into said equipment rack.

5 14. The system as described in Claim 8, wherein said electronic control module controls said locking module based on electronic information received from said sensor module.

15. A system for preventing a plurality of electronic devices from being
10 pulled out of an equipment rack simultaneously, said system comprising:
an electronic sensor module for sensing when a first electronic device coupled to said equipment rack is being slid out of said equipment rack;
an electronic locking module for restricting a second electronic device coupled to said equipment rack from being slid out of said equipment rack; and
15 an electronic control module coupled to said electronic sensor module and said electronic locking module.

16. The system as described in Claim 15, wherein said electronic device is selected from a server computer, a router, a disk array, a computing
20 device, a telecommunications device, an electronic data storage device, and a piece of electronic equipment.

17. The system as described in Claim 15, wherein said electronic sensor module is selected from an optical sensor, a proximity sensor, a
25 mechanical switch, a mechanical sensor, an electro-mechanical sensor, an

ultrasonic sensor, a hall-effect sensor, and a Linear Variable Differential Transformer (LVDT).

18. The system as described in Claim 15, wherein said electronic
5 locking module is selected from a solenoid, an electro-mechanical device, a solenoid capable of engaging and disengaging a pin or a latch, an electric motor capable of engaging and disengaging a pin or a latch, solid state circuitry, and a magnetic latch.

10 19. The system as described in Claim 15, wherein said electronic control module is selected from a processor, a controller, a state machine, and a microprocessor.

20. The system as described in Claim 15, wherein said electronic
15 control module controls said electronic locking module based on electronic information received from said electronic sensor module.